

## CLAIMS:

1. Communication system comprising a first node having a multiplexer for multiplexing a plurality of source signals into a multiplex signal, the first node comprises transmission means for transmitting the multiplex signal to a second node, the second node comprises a demultiplexer for demultiplexing the multiplex signal into said source signals,  
5 characterized in that the multiplexer is arranged for introducing a variable length auxiliary signal into the multiplex signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals to be transmitted.
2. Communication system according to claim 1, characterized in that the auxiliary  
10 signal comprises a predetermines symbol sequence.
3. Communication system according to claim 1 ~~or 2~~, characterized in that the  
length of the variable length auxiliary signal can also assume the value of zero.
- 15 4. Communication system according to claim 1, ~~2 or 3~~, characterized in that the multiplexer is arranged for multiplexing the source signals into packets, and for introducing the auxiliary signal into said packets, and in that the demultiplexer is arranged for extracting said packets from the multiplex signal, and for extracting said auxiliary signal from said packets.
- 20 5. Communication system according to claim 4, characterized in that the multiplexer is arranged for introducing a length field into the packet indicating the length of a source signal field in the packet, and in that the demultiplexer is arranged for extracting the source signal field using the length carried by the length field.
- 25 6. Communication system according to claim 5, characterized in that the length field can alternatively comprise a first number of symbols indicating a fixed length of the source signal field or a second number of symbols larger than the first number carrying a length value indicating the length of a variable length of the source field.

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7. Communication system according to claim 6, characterized in that the first number equals to one.

8. Transmitter node having a multiplexer for multiplexing a plurality of source signals into a multiplex signal, the node comprises transmission means for transmitting the multiplex signal, characterized in that the multiplexer is arranged for introducing a variable length auxiliary signal into the multiplex signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals to be transmitted.

9. Receiver node comprising a demultiplexer for demultiplexing a multiplexing signal into a plurality of source signals, characterized in that the demultiplexer is further arranged for extracting from the multiplex signal a variable length auxiliary signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals in the multiplex signal.

10. Transmission method comprising multiplexing a plurality of source signals into a multiplex signal, transmitting the multiplex signal to a second node, the method further comprises demultiplexing the multiplex signal into said source signals, characterized in that the method comprises introducing a variable length auxiliary signal into the multiplex signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals to be transmitted.

11. Multiplex signal carrying a plurality of source signals characterized in that the method comprises introducing a variable length auxiliary signal into the multiplex signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals.

12. Multiplex signal according to claim 11, characterized in that the length of the variable length auxiliary signal can also assume the value of zero.

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